Renewable Energy Question 32: *How has Michigan or other jurisdictions designed their renewable standards to adapt to unforeseen circumstances, or proposed to do so? What methods beyond legislative changes have been considered or implemented?*

Executive Summary

1. Many jurisdictions, including Michigan, have established a wide range of cost limitation mechanisms to protect ratepayers in case the costs of RPS compliance increase beyond what was foreseen

2. Under Michigan's current law, the Michigan Public Service Commission (MPSC) retains flexibility to alter RPS targets when the costs to customers would exceed a maximum set by PA-295. Michigan's effective rate cap is in line with the national median

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Given uncertainty about the future costs of RPS policies, state policymakers have developed a variety of approaches to limit the maximum impacts of these policies on electric rates.

As discussed in several studies[1], common approaches include:

- Alternative compliance payments
- Contract price caps
- Retail rate or revenue requirement impact caps
- Customer cost caps
- Renewable energy fund caps
- Ad hoc regulator discretion

A summary of the cost limitation mechanisms across the US is presented in the following chart, and each of the mechanisms is discussed in more detail in the pages that follow.

[1] G. Stockmayer, et al. Limiting the costs of renewable portfolio standards: a review and critique of current methods. Energy Policy. 2012.
B. Pierpont. Limiting the cost of renewables: lessons for California. Climate Policy Initiative. June 2012

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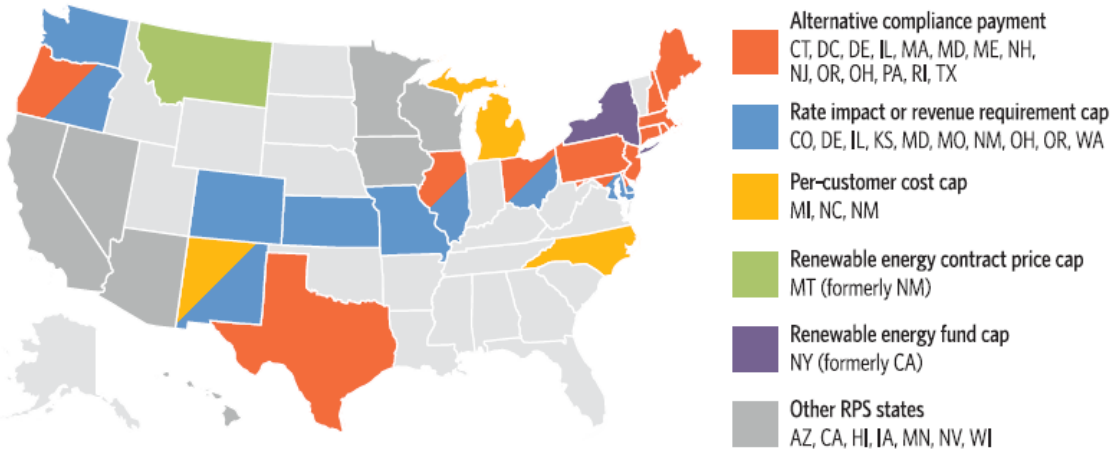
US RPS States and Primary Approaches to Limit Costs



Source: Stockmayer, Finch, Komor, Mignogna (2012), Wiser and Barbose (2011), DSIRE Database

Alternative compliance payments

In states with alternative compliance payments (ACPs), electricity suppliers may choose to make a financial payment for the shortfalls in renewable energy credits (RECs) to comply with the renewable portfolio standards (RPS), creating a price ceiling for RECs. ACP prices vary substantially by state and by technology. In cases where a state has a carve-out for solar energy, a separate ACP is usually established for solar RECs, at a higher price to reflect the higher costs of solar energy.

In some states, electricity suppliers can recover the costs of ACPs from ratepayers, with the ACP being used to fund new renewable energy projects. In other states, the costs of ACPs cannot be recovered from rate payers; ACPs act as penalties for not meeting renewable energy targets.

States using alternative compliance payments

ACP with automatic cost recovery	ACP with possible cost recovery	ACP with no cost recovery
Illinois	Delaware	Connecticut
Massachusetts	Maryland	Ohio
Maine	Oregon	Pennsylvania
New Hampshire	Washington DC	Texas
New Jersey		
Rhode Island		

Sources: Stockmayer, Finch, Komor, Mignogna (2012), Wiser and Barbose (2011), DSIRE Database.

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Contract price caps

In Montana, regulated utilities are not required to take power from a renewable energy resource with a price that exceeds the price of other available generating resource by 15%.

In New Mexico, contract price caps were set administratively for different types of resources: $0.049 per kWh for wind and hydro resources; $0.06254 per kWh for biomass and geothermal resources; and $0.15 per kWh for solar projects sized at 10 kilowatts and under, and $0.10 per kWh for solar projects over 10 kilowatts in size. However, these caps were removed in 2008, due to objections that the caps no longer represented the cost of procuring renewable energy.

In Illinois, renewable generation is procured by a central agency, Illinois Power Agency. The agency uses a confidential benchmark REC price based on regional renewable energy resources as a price limit when screening bids.

Retail rate or revenue requirement impact caps

Policymakers in many states define their cost limit as a maximum percentage change in electric retail rates. This increase can be expressed as an overall percentage change in retail rates over a period of time (e.g., a 1% maximum increase in retail rates in any year in MO), or a percentage of retail rates that can be collected to cover the incremental costs of renewable energy (e.g., incremental cost of the RPS cannot exceed 2% of a customer's electricity bill in NM).

Several states (OH, OR, KS and WA) cap the percentage of utilities' total revenue requirements that can be used to cover the incremental costs of renewable energy in a given year. Since revenue requirements represent the total amount of revenue a utility needs to receive in the rates in order to cover the costs, a revenue requirement cap can be translated into a "retail rate equivalent" cap.

States using retail rates or revenue requirement impact caps

Retail rate impact cap	Revenue requirement impact cap	Solar carve-out rate impact cap
Colorado	Kansas	Delaware
Illinois	Ohio	Maryland
Missouri	Oregon	
New Mexico	Washington	

Sources: Stockmayer, Finch, Komor, Mignogna (2012), Wiser and Barbose (2011), DSIRE Database.

These approaches typically apply to the incremental (rather than total) cost of renewable energy. Therefore the cost counted toward the limits depends heavily on the assumptions made about the baseline cost of electricity. In many cases, the cost of energy from a hypothetical new natural gas-fired power plant or the cost of energy from a hypothetical non-RPS scenario are used as a baseline. These baselines are typically dependent on a range of assumptions, including prices of fuel and capacity.

Customer cost caps

North Carolina, Michigan, and New Mexico have adopted a cost limit in terms of dollars per customer for each customer class. This approach defines renewable energy costs from a fixed surcharge rather than a charge proportional to energy use.

Similar to caps on retail rate or revenue requirements, customer cost caps typically apply to the incremental cost of renewable generation compared to non-renewable generation, which is dependent on a variety of assumptions on baseline technology or baseline scenarios.

Renewable energy fund caps

New York's RPS program procures RECs through the New York State Energy Research and Development Authority (NYSERDA). The program is funded through a surcharge on utility bills. The surcharge and the total funding for the program are established by regulators based on expectations for the cost of the program, and funding is divided into specific technology types.

Before California's adoption of a 33% RPS target in 2011, the state capped the amount of ratepayer funding, named "Above-Market Funds" (AMF), which could be used by California Public Utility Commission (CPUC) to cover the incremental costs of renewable energy above a market price benchmark.

Ad hoc regulator discretion

Some states have not relied on specific cost curtailment mechanisms but instead allow state energy regulators to use their discretion to limit excessive costs to consumers to ensure reasonable electric rates. Additionally, almost all states provide state regulatory agencies with sufficient discretion to waive certain compliance provisions where concerns of cost and fairness are raised. Ad hoc regulator discretion can be summarized into the following four areas to limit costs:

- Just and reasonable review in rulemaking (e.g., MN, IA)
- Contract review (e.g., NV)
- Freeze provision (e.g., NH)
- Waiver (e.g., OH, NC, NM)

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2. Under Michigan's current law, the Michigan Public Service Commission (MPSC) retains flexibility to alter RPS targets when the costs to customers would exceed a maximum set by PA-295. Michigan's effective rate cap is in line with the national median

Michigan has established customer cost caps for different customer classes. An electric provider does not have to comply with the renewable energy standard to the extent that, as determined by the Public Service Commission (PSC), recovery of the incremental cost of compliance will have a retail rate impact that exceeds any of the following:

- $3.00 per month per residential customer meter
- $16.58 per month per commercial secondary customer meter
- $187.50 per month per commercial primary or industrial customer meter

These retail rate impact limits apply only to the incremental costs of compliance, which is explicitly defined in Sec 47 (2) of Public Act 295 (2008). Electric providers may begin collecting the customer surcharge as soon as the PSC approves their renewable energy standard compliance plan.

In addition, Michigan has also adopted ad hoc regulator discretion on RPS compliance. Upon petition by an electric provider, the PSC may for good cause grant two extensions of the 2015 renewable energy standard (RES) deadline. Each extension shall be for up to one year. If two extensions of the 2015 RES deadline have been granted to an electric provider, upon subsequent petition by the electric provider at least three months before the expiration of the second extended deadline, the PSC shall, after consideration of prior extension requests and for good cause, establish a revised RES attainable by the electric provider. In addition, an electric provider that makes a good faith effort to spend the full amount of incremental costs of compliance as outlined in its approved renewable energy plan and that complies with its approved plan, subject to any approved extensions or revisions, shall be considered to be in compliance.

Cost limiting mechanisms vary considerately from state to state, which makes them hard to compare. Nonetheless, researchers in the Lawrence Berkeley National Laboratory[2] tried to translate the states' cost limitation mechanisms into equivalent retail rate caps. As shown in the following chart, Michigan has an effective retail rate cap of 3% by taking the weighted average of the caps for different customer classes. Michigan's retail rate cap is in line with the national median.

[2] Galen Barbose. Lawrence Berkeley National Laboratory. Renewable Portfolio Standards in the United States: A Status Update. 2012 National Summit on RPS. Washington D.C. http://www.cleanenergystates.org/assets/2012-Files/RPS/RPS-SummitDec2012Barbose.pdf. Accessed April 22, 2013.

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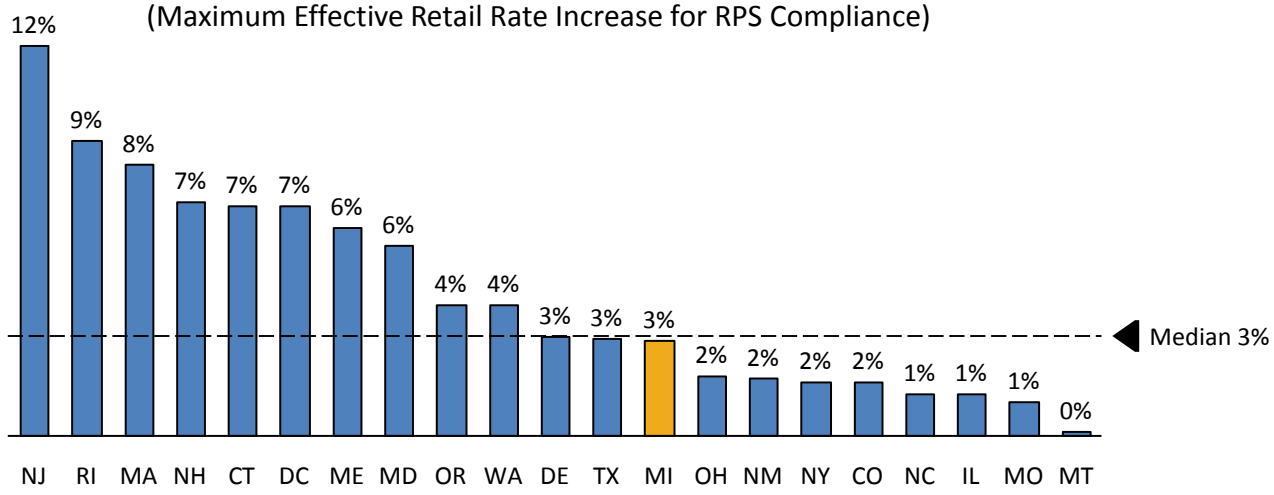
State Equivalent Retail Rate Caps

(Maximum Effective Retail Rate Increase for RPS Compliance)



Note: no explicit cap on incremental compliance costs in 8 states (AZ, CA, IA, KS, HI, NV, PA, WI), though KS caps gross RPS procurement costs and CA is currently developing its cost limiting mechanism

Source: Galen Barbose. Lawrence Berkeley National Laboratory. Renewable Portfolio Standards in the United States: A Status Update. 2012 National Summit on RPS. Washington D.C. http://www.cleanenergystates.org/assets/2012-Files/RPS/RPS-SummitDec2012Barbose.pdf. Accessed April 22, 2013.